CLAIMS

1. A method for mounting a tube means (24) in a space (23) having a shape corresponding to the shape of the tube means (24), characterized in that the tube means (24) is inserted into the space (23) situated in a stator tooth slot (20) of a stator (1) of a rotating electric machine, having windings of high-voltage cable (11), after which a pressure medium is heated and pressurizes the tube means (24) so that this softens and expands, its outer periphery assuming the shape of the restricting area of space (23), after which the hot pressure medium is replaced with or converted to a cold pressure medium which fills out the expanded tube means (24) and causes it to solidify and permanently assume this expanded shape, whereupon the tube means (24) is used as a cooling tube.

2. A method as claimed in claim 1, characterized in that the tube means (24) acts as a cooling tube on one hand and as a fixing means for the high-voltage cable (11) on the other hand.

3. A method as claimed in any of claims 1-2, characterized in that the tube means (24) is allowed to expanded until 50% remains of its original wall thickness.

4. A rotating electric machine with at least one tube means (24) mounted according to the method as claimed in any of claims 2-3, characterized in that the stator is provided with stator teeth (4) extending inwardly from a stator yoke (5), which teeth between each other form stator teeth slots (20), in which stator windings (6) are provided, and in that the slots (20) are provided with at least one tube means (24) made of dielectric material, each inserted into a space (23) extending substantially axially through the stator and formed between cable parts (1 8) and an even side (22) provided in the stator tooth slot (20).

5. A machine as claimed in claim 4, characterized in that the tube means (24) is made of polymer material.

6. A machine as claimed in claim 4, characterized in that the tube means (24) is made of high-density polyethylene (HDPE).

7. A machine as claimed in claim 4, characterized in that the tube means (24) is made of cross-linked polyethylene (XLPE).

8. A machine as claimed in any of claims 4-7, characterized in that the space (23) is triangular and that also the tube means (24) is triangular.

9. A machine as claimed in claim 8, characterized in that tube means (24) are arranged in all spaces (23) in a stator tooth slot (20).

10. A machine as claimed in any of claims 8-9, characterized in that the high-voltage cable (11) is of a kind which comprises a conductor having of a plurality of strand parts (12), an inner semiconducting layer (13) enclosing the conductor, an insulating layer (14) enclosing the inner semiconducting layer, and an outer semiconducting layer (15) enclosing the insulating layer.

11. A machine as claimed in claim 10, characterized in that the high-voltage cable (11) has a diameter within the interval 20-250 mm and a conducting area within the interval 80-3000 mm^2.

12. A machine as claimed in any of claims 4-11, characterized in that said insulated conductor or high-voltage cable (11) is flexible.

13. A machine as claimed in claim 12, characterized in that said layers (8, 9, 10) are arranged to adhere to each other even when the insulated conductor or high-voltage cable (11) is bent.

14. A machine as claimed in any of claims 4-13, characterized in that at least two adjacent layers (13,14,15) of the machine winding have substantially the same coefficients of thermal expansion.

15. A machine as claimed in any of claims 4-14, characterized in that the winding is flexible and comprises an current conducting core surrounded by an inner semiconducting layer enclosing the core, an insulating layer of solid material enclosing the inner

semiconducting layer, and an outer semiconducting layer enclosing the insulating layer, said layers adhering to each other.

16. A machine as claimed in any of claims 4-15, characterized in that said layers are made of materials having such an elasticity and such a relation between their coefficients of thermal expansion that the volume changes of the layers caused by temperature variations during operation can be absorbed by the elasticity of the material so that the layers maintain their contact with each other at the temperature variations occurring during operation.

17. A machine as claimed in any of claims 4-16, characterized in that the materials used in said layers are of high elasticity.

18. A machine as claimed in any of claims 4-17, characterized in that the coefficients of thermal expansion for the materials in said layers are substantially the same.

19. A machine as claimed in any of claims 4-18, characterized in that each of the semiconducting layers is arranged to constitute a substantially equipotential surface.